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Are current social marketing campaigns getting through to undergraduate university students?

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Abstract

In this study, we conduct a survey of health behaviours among undergraduate university students. The health behaviours include weight control, exercise, smoking, alcohol consumption, use of illicit drugs, and safe-sex practices. By comparing the results with national survey results, we test the hypothesis that university students – who have completed high school, with better than average grades – are more likely to exhibit healthy behaviours and avoid unhealthy or unsafe behaviours than the general population. Detailed information on the health behaviours of university students is not currently available (see Australia's Health 2000, in which there are no reports of health behaviours by education level).

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ARE CURRENT SOCIAL MARKETING CAMPAIGNS GETTING THROUGH TO UNDERGRADUATE UNIVERSITY STUDENTS?

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Track: Political, Social and Not-for-Profit Marketing

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Introduction

In this study, we conduct a survey of health behaviours among undergraduate university students. The health behaviours include weight control, exercise, smoking, alcohol consumption, use of illicit drugs, and safe-sex practices. By comparing the results with national survey results, we test the hypothesis that university students – who have completed high school, with better than average grades – are more likely to exhibit healthy behaviours and avoid unhealthy or unsafe behaviours than the general population. Detailed information on the health behaviours of university students is not currently available (see *Australia's Health 2000*, in which there are no reports of health behaviours by education level).

There have been a number of large-scale, mostly government-funded, social marketing campaigns targeting the above health behaviours. Undergraduate students have undoubtedly been exposed to these campaigns, initially as high school students and now as university students. The campaigns are briefly summarized below.

National Physical Activity Guidelines – The National Physical Activity Guidelines for Australians were launched in May 1999. The Guidelines recommend that people "put together at least 30 minutes of moderate-intensity physical activity on most, preferably all days of the week" (Commonwealth Department of Health and Aged Care 1999). These guidelines have been extensively publicized through paid and unpaid media.

National Tobacco Campaign – the National Tobacco Campaign ("Every cigarette is doing you damage") is aimed at 18-40 year old smokers, and consists of a series of ads which provide graphic images of the health damage caused by smoking (with TV ads and accompanying print materials code-named "Lung," "Artery," "Tumour," "Stroke" and "Eye").

National Alcohol Campaign – the National Alcohol Campaign ("Where are your choices taking you") is aimed at teenagers aged 15-17 and young adults aged 18-24 (http://www.nationalalcoholcampaign.health.gov.au/campaign/campaign_outline.htm#target). The campaign consists of a series of TV, cinema and print ads that demonstrate the potential negative consequences of excessive drinking.

National Drugs Campaign – the National Drugs Campaign ("Our strongest defence against against drugs") is primarily aimed at parents and consists of a series of TV and print ads and supporting resources which aim to convince parents to talk to their kids about drugs which the government argues, will reduce drug use among young people.

Chlamydia. Be Smart. Be Tested – the NSW Health chlamydia testing campaign ("Just because you can't see it…Doesn't mean you don't have it") targets sexually active males and females and includes cinema ads, university magazines, and street press advertising. Chlamydia is fastest-growing STD in Australia, with 5,500 known cases in 2001 (NSW Health 2002). As well as encouraging chlamydia testing for all sexually-active males and females, the campaign focuses on the importance of using condoms to prevent chlamydia infection.

Young people between the ages of 15 to 24 are the primary target audience for most of these campaigns. Undergraduate university students are a demographic subgroup of this age group, distinguished by being in the upper half of the age range and with a higher educational achievement than young people and adults in general. The obvious hypothesis is that this more "intelligent" subgroup are not only better able to understand these health messages but also more "sensible" about adopting the messages' health recommendations. However, intelligent audiences, according to McGuire's (1968, 1976) compensatory theory of personality and persuasion, are also more difficult to persuade: they comprehend messages more easily but are less likely to yield to the message conclusion unless the arguments are extremely convincing. To the extent that government health messages are not extremely convincing, McGuire's theory predicts that an intelligent audience would be less likely to adopt the behaviours than the general population which is, by definition, of average intelligence or education level.

Methodology

A questionnaire was designed to collect information on weight control, exercise, smoking, drinking, illicit drug use, and safe-sex practices. The questionnaire was administered in a university lecture theatre setting. Respondents were informed that participation was voluntary and all responses were collected anonymously.

The participants were 317 students in an introductory marketing class at a NSW university. The mean age of the students was 19.9 years (SD = 4.2 years, so most were aged 18 to 25); and 59% were female. Three-quarters (74%) of the participants were born in Australia, and a further 10% were born in an English-speaking country (e.g., the U.K., U.S.A.).

Results

Weight Control

Body mass index (BMI) is a person's weight in kilograms divided by their squared height in metres (Garrow & Webster 1985; World Health Organisation 1995). The assessment criteria used for BMI are those provided by the Centers for Disease Control, based on studies of the relationship between body mass index and mortality (e.g., Calle et al. 1999). That is: below 18.5 is classified as underweight; 18.5-24.9 as normal; 25.0-29.9 as overweight; and 30.0 and above as obese (CDC, 2003). The average BMI of the participants in the present study was 22.2 (SD = 3.5; range = 15.7 – 45.0). For females, the average was 21.5 (SD = 3.3; range = 15.7 – 33.8); and for males the average was 23.1 (SD = 3.6; range = 17.0 – 45.0). Thus, the mean BMI for the group as a whole, and for each gender, was within the normal range. It is estimated that, for the Australian population as a whole, mean BMI increases from around 21 in 12-year-olds to 27 in 24-year-olds (National Public Health Partnership 1999); thus an average BMI of 23.1 for males in our sample (mean age of 20 years) is close to the expected level, but an average BMI of 21.5 for females is lower than expected.

Of some concern is that, among our sample, females were more likely to *be* underweight and to *perceive* themselves as overweight. Twenty-one (12.6%) of the females were underweight, 77.2% were of normal weight, 6.0% were overweight, and 4.2% obese. This proportion of underweight females is consistent with the national average – 13% of females aged 18-24 years are classified as being underweight (ABS 2001). However, even though only 10.2% our sample had a BMI that was over the recommended healthy weight

range, 61% reported that they were currently trying to lose weight. Only 4.2% (4) of the males were underweight, 76% were of normal weight, 15.8% were overweight, and 4.0% obese. In total, 19.8% of the males had a BMI that was over the recommended healthy weight range, which is well below the figure of 35% for the 18-24 age group in the general population (AIHW 2000), and 19% reported that they were trying to lose weight.

Exercise

Overall, 60.5% of the undergraduate students reported doing 150 minutes or more of any type of exercise in an average week, with 11% reporting less that 30 minutes per week (as opposed to the recommended 30 minutes per day). Males were more likely to be physically active than females – with 49.7% of females reporting 150 minutes or more per week (and 14.4% *less than 30* minutes), compared to 76.3% of men reporting 150 minutes or more (and 6.1% less than 30 minutes). The female university students' incidence of sufficient exercise, at 49.7%, is considerably below the national incidence for 18-29 year old females of 60%. On the other hand, the male university student incidence, at 76.3%, is above the national incidence for 18-29 year old males of 62% (AIHW 2000).

Smoking

More than two-thirds of the undergraduate students (68.5%) described themselves as a "never smoker," and 8.9% as an "ex-smoker." There were no statistically significant differences between males and females across the four smoking categories (never-smoker, ex-smoker, social smoker, or regular smoker). Among the 22.6% of self-reported smokers, the participants were more than three times as likely to describe themselves as a "social smoker" (17.2% of the total sample) than a "regular smoker" (5.4%).

Australia-wide, around 29% of males and 27% of females aged 18-24 years are current smokers (AIHW 2000). Our undergraduate sample, therefore, both males and females, were less likely to be smokers than the same-aged general population.

Alcohol

The undergraduate students were asked how many drinks they would consume on a *usual* Friday or Saturday night. These results are analysed separately due to the different safe drinking levels prescribed for males and females. The National Health and Medical Research Council recommends that males drink an average of no more than 4 standard drinks a day and not more than 6 standard drinks and females drink an average of no more than 2 standard drinks a day and not more than 4 standard drinks in any one day (NHMRC 2001). More than 4 drinks in any one day for females and more than 6 for males is classified as "risky" drinking and more than 6 for females and more that 7 for males as "high-risk" drinking (NHMRC 2001). It is very important to note that these recommendations refer to standard drinks (10ml of alcohol), and most drinks are not served in "standard drinks" (for example, a standard drink of beer is _ of a stubby).

Females – Just under half, 44.1%, of the female participants reported drinking more than four drinks on an average Friday or Saturday night, with 20.4% reporting 5-6 drinks, 14.5% 7-8 drinks, and 9.2% 9 or more drinks. That is, even if these were "standard drinks" (and they are very likely to have been larger), 20.4% were drinking at a "risky" level and 9.2% at a "high-risk" level on an *average* Friday or Saturday night.

Males – Just under half, 43%, of the male participants reported drinking more than six drinks on an average Friday or Saturday night, with 19.5% reporting 7-8 drinks and 23.5% 9 or more drinks. That is, even if these were "standard drinks", 19.5% were drinking at a "risky" level and 23.5% at a "high-risk" level on an *average* Friday or Saturday night.

Australia-wide, 22% of males aged 20-29 reported drinking at a level which risked short-term harm at least once in the past year and 15% at least weekly; and 20% of females

once in the last year and 9% at least weekly (AIHW 2002). In comparison, 44.1% of females and 43% of males in our sample reported drinking at this level on a "usual" Friday or Saturday night out.

Illicit Drugs

Cannabis – Cannabis was the most frequently used drug, as it is across the population, with 16.3% of our sample describing themselves as current users (14.7% occasional and 1.6% regular), and 11.9% as ex-users. The levels of cannabis use are considerably lower than the national statistics, which show 41% of 16 to 24 year olds reporting recent use (National Public Health Partnership 1999). The percentage of males and females in our sample describing themselves as occasional users was equal, although no females described themselves as regular users.

Reported usage of other illicit drugs was considerably lower: *Ecstasy* – 8.7% described themselves as current users and 5.8% as ex-users. This is very similar to the national figure, which shows approximately 8% of 16 to 24 year olds report using ecstasy (National Public Health Partnership 1999). There was no difference between males and females in current usage (8.6% versus 8.8%). *Cocaine* – only 2.2% described themselves as current users and 2.3% as ex-users. Although current use of cocaine among the undergraduate students is low in absolute terms, it is twice as high as the most recent figure of 1.0% usage nationally for all people aged 14 and over (AIHW 2002). Males were slightly more likely to report current or past use of cocaine than females (7.1% versus 2.7%), although this difference was not significant. *Heroin* – only four participants described themselves as current users of heroin (all male) and one (female) as an ex-user. The most recent figure for the Australian population is less than one percent current users (AIHW 2002).

STD prevention

Approximately one-third of the respondents (34.4%) reported that they had not had sex in the past six months (a very similar proportion of males and females), and these individuals were excluded from the analysis of safe sex practices.

Only slightly more than one-third of sexually active students reported that they always use a condom, and one-quarter said that they *never* use a condom. It is interesting to note that males were more likely to report using a condom every time they have sex (45.2% versus 33.3%) although this difference was not statistically significant, and females were more likely to report *never* using a condom when they have sex (35.1% versus 19.0%, $t = 2.51$, $p < .02$). This seemingly inconsistent result between the sexes has been found in other studies (e.g., McCombie, Hornik & Anarfi 2002).

No exactly comparable figures are available for condom use. However, the undergraduate student figures for non-use are considerably higher than those reported by year 10 and year 12 high-school students (AIHW 2000).

STD detection

Of those respondents who were currently sexually active, only 10.1% reported having been tested for HIV/AIDS in the last 12 months; 7.7% having been tested for chlamydia; and 11.8% for any other STD. Females were more likely than males to have been tested in all three cases, with this difference being statistically significant for both chlamydia (11.7% versus 2.4%, $t = 2.94$, $p < .01$) and "other" STDs (17.0% versus 4.8%, $t = 2.82$, $p < .01$). Although we were unable to locate data on STD screening per se, we do know that between 1991 and 1999 notification of chlamydia increased from 92.6 to 268.2 per 100,000 among people aged 12 to 24 years (AIHW 2002).

Discussion

The undergraduate university students in our sample appear to be consistent with the national average in many of the measures of their health behaviour and health status, such as being close to the population average for body mass index and proportion of overweight and underweight males and females.

The respondents exercise more and smoke less than average Australians of their age group. However, there is considerable evidence that both smoking and sedentary behaviour are more common among people of lower education and SES – thus, it is likely that their behaviours are closer to the average for their demographics.

The respondents appear to drink alcohol and consume illicit drugs at levels very similar to the national average (regardless of education and SES). Thus, it would appear that the large-scale (usually government) campaigns which target adolescents' and young adults' alcohol and drug consumption are having little effect on this group.

The respondents continue to engage in unsafe sex and to avoid being tested for sexually transmitted diseases. Just under half of sexually-active males, and only one-third of females, report always using a condom when they have sex; and 30% of those who do use condoms specifically state that they do not do so, even in part, to avoid transmission of STDs. Importantly, less than 8% report having been tested for chlamydia in the past 12 months. The current chlamydia awareness campaign – which is directly targeted at this group – has two key messages: "use a condom" and "have a chlamydia test." It appears that this campaign, like the drug and alcohol campaigns, has little impact on the targeted behaviours.

It appears that the hypothesis that, due to their higher education level, undergraduate university students should be more likely to understand the health messages and adopt the recommended health behaviours is only supported for weight control, exercise (among males), and smoking. There is insufficient population data to make conclusions about illicit drug use and STD screening. Consistent with the alternate hypothesis that people of average education are more likely to be persuaded, we find less compliance among undergraduate university students for the following health behaviours: exercise among females, safe drinking (both males and females), and safe-sex practices (both males and females). Reasons for these departures from expected "better" behaviours should be the subject of future research.

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